

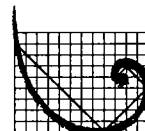
Memorandum

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To:	File
From:	Robert J. Drake, PE, Ph.D., LEP
Date:	July 14, 2009
Subject:	Results of Off-Site ERA Efforts 80 Pickett District Road, New Milford, Connecticut ERM Project No. 0096529



ERM®

RDMS DocID

107850



Background

As part of the US EPA's RCRA Corrective Action program, the CT DEP recently requested that ERM evaluate the potential for residual effects to off-site ecological receptors from sediments possibly affected by discharges from a pipe possibly associated with the former Burndy Site. The CT DEP provided ERM with a map from an earlier report depicting a pipeline from the former lagoon which discharged to the ground on the adjacent property to the east (and thence to the Housatonic River). ERM found no information regarding the closure status of this pipe, and initial efforts to locate this conduit were unsuccessful. CT DEP originally requested that ERM collect and analyze a series of sediment samples from the discharge point of the pipeline to the culvert running under the railway embankment on the off-site parcel east of the Site. During a meeting on June 9, 2009, the CT DEP and ERM agreed that the appropriate scope of work needed to include the collection of six (6) sediment samples from depositional areas, with subsequent analysis for copper, lead, and zinc. The focused sampling and analysis was based on the fact that these metals were the most significant constituents identified in the sludge which had been deposited in the former Burndy lagoon and sludge drying beds. If found, the documented presence of these constituents at levels of environmental concern would suggest that an ecological risk may be present.

As agreed in the meeting with the DEP, the specific levels selected for comparison were the threshold effect concentrations (TECs) and probable effect concentrations (PECs) for sediments, as obtained from *Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems* (MacDonald *et al.*, 2000).

Sampling Effort

On June 26, 2009, ERM staff (Robert Drake and Dan Nelson), using aerial photographs, were able to locate in the field the discharge point of the

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(approximately 2-foot diameter) galvanized steel pipe. The pipe was observed to have a small flow discharging to the stream channel that was apparently stormwater.

The stream channel between the end of the pipe and the culvert extending beneath the railroad tracks was braided, and "disappears" into tall stands of *Phragmites* or other vegetation in various locations. ERM staff walked the entire length of the "channel" from the pipe discharge to the railway underpass, and noted the presence of at least one inch of standing water the entire length.

A total of six (6) sediment samples were collected at the 0 - 6 inch depth from the approximate locations shown on Figure 1, attached. These locations were considered representative of depositional areas in the discharge channel. Sample SED-1 was located near the discharge of the pipe. ERM personnel left field markers (flags) at the sampling locations.

Samples were collected by hand (trowel), placed in 8-ounce, amber glass, Teflon-lined jars for transport with the chain-of-custody to the analytical laboratory (Spectrum Analytical, in Agawam, Massachusetts) for analysis for copper, lead, and zinc.

The results were received from the laboratory on June 30, 2009. The data is summarized on Table 1 (attached).

These results indicate:

- All concentrations of copper and lead were below their respective TECs;
- All but one detection of zinc were below TECs; and
- One sample of sediment (SED-5) was found to contain zinc slightly above the TEC, but well below its PEC.

Based on the data obtained and summarized on Table 1, there is no evidence of significant ecological risk associated with historic discharges from the pipeline from the former Burndy facility.

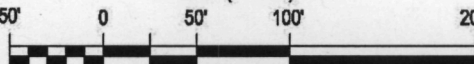
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Legend

- ⊕ Approximate Monitoring Well Location 50'
- ▼ Sediment Sampling Location

Scale (1"=100')



200' Figure 1 - Sediment Sampling Locations
80 Pickett District Road, New Milford, CT



ERM ID #	TEC	PEC	SED-1	SED-2	SED-3	SED-4	SED-5	SED-6
Date Sampled			6/26/2009	6/26/2009	6/26/2009	6/26/2009	6/26/2009	6/26/2009
Lab ID #			SA96924-01	SA96924-02	SA96924-03	SA96924-04	SA96924-05	SA96924-06
Time Collected			9:29	12:00	9:37	10:51	13:19	14:43
Metals (ppm)								
Copper	31.6	149	16.1	20.3	11.2	30	17.4	24.4
Lead	35.8	128	7.83	21.7	9.5	14.5	8.23	30.1
Zinc	121	459	53.1	88.4	46.1	49.8	43.2	135

TEC = Threshold Effect Concentration

PEC = Probable Effect Concentration